

# Exhibit 12 Part 18

## Part 9 of Attachment L to the Allocation Recommendation Report (ARR2760-ARR2845)

United States' Motion to Enter Consent Decree,  
*United States v. Alden Leeds, Inc. et al.*, Civil Action No. 22-7326 (D.N.J.)

Allocation Facility Cmass Calculation

Sequa Corporation (Foundry Street Complex)	185 Foundry Street	Newark	NJ	07105
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	-	0.00%	749.03	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	0.00%	32,522.45	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	0.00%	98.61	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	-	100.00%	-	0.00%	2,331.46	100.00%	-	0	1.018817E-2	0
LPAHs	100.00%	-	100.00%	-	0.00%	1,554.30	100.00%	-	0	1.018817E-2	0
PCBs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

Sequa Corporation (Foundry Street Complex)	185 Foundry Street	Newark	NJ	07105
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0	0	0
LPAHs	0.01	170,000.00	0	0	0
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

Sequa Corporation (Foundry Street Complex)	185 Foundry Street	Newark	NJ	07105
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	0	0	0	0	0
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	0	0	0	0	0
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

Sequa Corporation (Foundry Street Complex)	185 Foundry Street	Newark	NJ	07105
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
43,743	gal discharged per day/week/month	All wastewater and stormwater discharged to strip drains in complex connected to industrial sewer
42	# hours/per day discharged	
5	#days/week discharged	
52	#weeks/yr discharged	
11,373,206	calc gal/yr	
	discharge(PAS00111828,PAS00128843,PAP00374662,PAS00000682,PAS00014611,PAP00049170,PAP00120043,PAS00044688,PAS00104294)	
1967	Yr Ops started	
1987	Yr Ops ceased	
20	calc #yrs facility operated (PAS00000242)	
<b>Copper (Cu)</b>		
20	#yrs facility discharged	
0.87	calc mg/L COC discharged (PAP00049166, PAS00000682, PAP00049170, PAS00104294)	1976 Waste Effluent Survey (.16mg/l); 1975 PVSC Ind WWQ, dated 1978 (.16 mg/l); 1979 PVSC Sewer Connection App, dated 1980 (.16mg/l); and 1986 Ind Pretreatment Program Annual Report (3.0mg/l)
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
749.03	calc kg COC discharged	
<b>Lead (Pb)</b>		
20	#yrs facility discharged	
37.78	calc mg/L COC discharged (PAP00049166, PAS00000682, PAP00049170, PAS00104294)	1976 Waste Effluent Survey (.1mg/l); 1975 PVSC Ind WWQ, dated 1978 (.1 mg/l); 1979 PVSC Sewer Connection App, dated 1980 (.9mg/l); and 1986 Ind Pretreatment Program Annual Report (150mg/l)
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
32,522.45	calc kg COC discharged	
<b>Mercury (Hg)</b>		
20	#yrs facility discharged	
0.1145	calc mg/L COC discharged (PAP00049166, PAS00000682, PAP00049170, PAS00044688, PAS00104294)	1976 Waste Effluent Survey (.06mg/l); 1975 PVSC Ind WWQ, dated 1978 (.06mg/l); 1979 PVSC Sewer Connection App, dated 1980 (.002mg/l); 1985 Permit Application (.0007mg/l); and 1986 Ind Pretreatment Program Annual Report (.45mg/l)
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
98.61	calc kg COC discharged	
<b>HPAHs</b>		
20	#yrs facility discharged	
45.13	calc mg/L O&G (PAP00049166, PAP00049170, PAS00044688)	calcs used to convert mg/kg O&G to HPAHs; remove if not needed
10%	% O&G that is considered PAHs	1976 Waste Effluent Survey (6.0 mg/l Oils); 1979 PVSC Sewer Connection Permit, dated 1980 (35 mg/l Oils); and 1985 Permit Application (94.4 mg/l Oils)
60%	% PAHs considered as HPAHs	
2.71	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
2,331.46	calc kg COC discharged	
<b>LPAHs</b>		
20	#yrs facility discharged	
45.13	calc mg/L O&G (PAP00049166, PAP00049170, PAS00044688)	calcs used to convert mg/kg O&G to LPAHs; remove if not needed
10%	% O&G that is considered PAHs	1976 Waste Effluent Survey (6.0 mg/l Oils); 1979 PVSC Sewer Connection Permit, dated 1980 (35 mg/l Oils); and 1985 Permit Application (94.4 mg/l Oils)
40%	% PAHs considered as LPAHs	
1.81	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
1,554.30	calc kg COC discharged	
<b>PCBs</b>		
11	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
<b>DDx</b>		
6	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
<b>Dieldrin</b>		
21	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
<b>Dioxins/Furans</b>		
20	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
<b>Dioxin/Furan Precursor - 2,4-D</b>		
21	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
<b>Dioxin/Furan Precursor - 2,4,5-T</b>		
19	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
<b>Dioxin/Furan Precursor - 2,4,6-TCP</b>		
9	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
<b>Summary DMassCOC for POTW:</b>		
749.03	kg Copper	
32,522.45	kg Lead	
98.61	kg Mercury	
2,331.46	kg HPAHs	
1,554.30	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	

-	kg Dioxins/Furans	
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Sequa Corporation (Foundry Street Complex)

185 Foundry Street			Newark	NJ	07105				
Facility BS	CUF	CUF_Category		CUF_NOTES		COF	COF_NOTES		Facillty Adjusted BS
0	0.0%	Historically Compliant or	No Evidence	Soil sampling and remediation took place to remove PCB contaminated soils and groundwater from the site. A total of 1,400 cubic yards of PCB-impacted soils were removed from accessible exterior areas, which were generally excavated to a depth of two feet. A total of 165 cubic yards of PCB-impacted soils were removed from the former Boiler Room floor (PAP- 00124050). No information on NOV's was identified in the available file material.		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities		0

Sequa Corporation (Foundry Street Complex)

185 Foundry Street			Newark	NJ	07105				
Facility BS	CUF	CUF_Category		CUF_NOTES		COF	COF_NOTES		Facillty Adjusted BS
0	0.0%	Historically Compliant or	No Evidence	Soil sampling and remediation took place to remove PCB contaminated soils and groundwater from the site. A total of 1,400 cubic yards of PCB-impacted soils were removed from accessible exterior areas, which were generally excavated to a depth of two feet. A total of 165 cubic yards of PCB-impacted soils were removed from the former Boiler Room floor (PAP- 00124050). No information on NOV's was identified in the available file material.		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities		0

Allocation Facility Cmass Calculation

Seton Company, Inc. (Seton Tanning)	349 Oraton Street, Newark, NJ 07104 849 Broadway, Newark, NJ 07104 62 Verona Ave, Newark, NJ 07104	Newark	NJ	07104

Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	5,700.12	8.23%	25,967.21	100.00%	-	7,836.08	1.018817E-2	79.84
Lead	100.00%	-	100.00%	13,999.24	8.23%	63,774.30	100.00%	-	19,245.05	1.018817E-2	196.07
Mercury	100.00%	-	100.00%	115.99	8.23%	528.40	100.00%	-	159.46	1.018817E-2	1.62
HPAHs	100.00%	-	100.00%	84,067.73	8.23%	382,975.19	100.00%	-	115,569.7	1.018817E-2	1,177.44
LPAHs	100.00%	-	100.00%	56,045.15	8.23%	255,316.78	100.00%	-	77,046.46	1.018817E-2	784.96
PCBs	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	8.23%	-	100.00%	-	0	1.018817E-2	0

Allocation Facility COC Base Scores - Protocol Calculation

Seton Company, Inc. (Seton Tanning)	349 Oraton Street, Newark, NJ 07104 849 Broadway, Newark, NJ 07104 62 Verona Ave, Newark, NJ 07104	Newark	NJ	07104

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	79.84	3.802E-5	2.623E-5
Lead	0.01	3,200,000.00	196.07	6.127E-5	6.127E-7
Mercury	0.95	42,000.00	1.62	3.868E-5	3.675E-5
HPAHs	0.05	240,000.00	1,177.44	4.906E-3	2.453E-4
LPAHs	0.01	170,000.00	784.96	4.617E-3	4.617E-5
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

Seton Company, Inc. (Seton Tanning)	349 Oraton Street, Newark, NJ 07104 849 Broadway, Newark, NJ 07104 62 Verona Ave, Newark, NJ 07104	Newark	NJ	07104

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	2.829E-2	79.84	59,335.76	2.829E-2	1.952E-2
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	6.669E-2	196.07	213,209.75	6.669E-2	6.669E-4
Mercury	0.95	42,000.00	4,322.53	41,955.96	3.689E-2	1.62	1,547.72	3.689E-2	3.504E-2
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	2.659E-2	1,177.44	5,204.11	2.659E-2	1.329E-3
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	2.557E-2	784.96	3,562.4	2.557E-2	2.557E-4
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

Seton Company, Inc. (Seton Tanning)	349 Oraton Street, Newark, NJ 07104 849 Broadway,Newark, NJ 07104 62 Verona Ave, Newark, NJ 07104	Newark	NJ	07104
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Verona Ave	CSO	1.27%	21.70%	
2	Verona Ave	Bypass	7.95%	100.00%	

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	Documentation only shows discharge to PVSC
	# hours/per day discharged	Three contiguous properties at 349 Oraton St, 62 Verona Ave and 849 Broadway
5	#days/week discharged	1975 Waste Effluent Survey - 93100000 gallons wastewater to sanitary (1974)
52	#weeks/yr discharged	1975 waste effluent sample = 661568 gpd
88,441,160	calc gal/yr discharge PAS00102300, 304, 305; PAS 00102292,93	1979 PVSC Sewer Connection App = 810660 + 19392 gpd
1906	Yr Ops started	
2006	Yr Ops ceased	
100	calc #yrs facility operated	
Copper (Cu)		
100	#yrs facility discharged	1975 Waste Effluent Sample
0.946	calc mg/L COC discharged PAS00102292, 93 & PAS00102304,305	1979 PVSC Sewer Connection Application
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
31,667.33	calc kg COC discharged	
Lead (Pb)		
100	#yrs facility discharged	1975 Waste Effluent Sample
2.32	calc mg/L COC discharged PAS00102292, 93 & PAS00102304,305	1979 PVSC Sewer Connection Application
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
77,773.53	calc kg COC discharged	
Mercury (Hg)		
100	#yrs facility discharged	1975 Waste Effluent Sample
0.0193	calc mg/L COC discharged PAS00102292, 93 & PAS00102304,305	1979 PVSC Sewer Connection Application
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
644.39	calc kg COC discharged	
HPAHs		
100	#yrs facility discharged	1975 Waste Effluent Sample
232.53	calc mg/L O&G PAS00102292, 93 & PAS00102304,305	1979 PVSC Sewer Connection Application
10%	% O&G that is considered PAHs	
60%	% PAHs considered as HPAHs	
14	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
467,042.91	calc kg COC discharged	
LPAHs		
100	#yrs facility discharged	1975 Waste Effluent Sample
232.53	calc mg/L O&G PAS00102292, 93 & PAS00102304,305	1979 PVSC Sewer Connection Application
10%	% O&G that is considered PAHs	
40%	% PAHs considered as LPAHs	
9	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
311,361.94	calc kg COC discharged	
PCBs		
49	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
33	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
38	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
100	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
61	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
41	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
26	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
31,667.33	kg Copper	
77,773.53	kg Lead	
644.39	kg Mercury	
467,042.91	kg HPAHs	
311,361.94	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Seton Company, Inc. (Seton Tanning)

349 Oraton Street, Newark, NJ 07104  
849 Broadway,Newark, NJ 07104  
62 Verona Ave, Newark, NJ 07104

NewarkNJ07104

Facility BS	CUF	CUF_Category	CUF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
3.551E-4	10.0%	Periodic Noncompliacne	In 1956, it was noted that Seton dumped solid industrial waste into the sanitary sewer. In 1978, PVSC documented poor housekeeping and illegal industrial discharges to the combined sanitary and storm sewer system on Verona Avenue. Reportedly, the discharged material contained “high pH liquids as well as animal fats, greases and oils.” Seton representatives indicated that they could not afford the pre-treatment that was required (PAS-00008172). According to the Civil Action Consent Order filed on May 2, 1991, Seton’s wastewater discharge continued to exceed “pretreatment effluent limitations” for chromium, sulfur, and pH (PAS-00102337-338)	20.0%	20% Failed to participate in conduct of allocation as offered by EPA	4.616E-4
AP_ABS						4.616E-4

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

Seton Company, Inc. (Seton Tanning)

349 Oraton Street, Newark, NJ 07104  
849 Broadway, Newark, NJ 07104  
62 Verona Ave, Newark, NJ 07104

Newark

NJ

07104

Facility BS	CUF	CUF_Category	CUF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
5.682E-2	10.0%	Periodic Noncompliacne	In 1956, it was noted that Seton dumped solid industrial waste into the sanitary sewer. In 1978, PVSC documented poor housekeeping and illegal industrial discharges to the combined sanitary and storm sewer system on Verona Avenue. Reportedly, the discharged material contained “high pH liquids as well as animal fats, greases and oils.” Seton representatives indicated that they could not afford the pre-treatment that was required (PAS-00008172). According to the Civil Action Consent Order filed on May 2, 1991, Seton’s wastewater discharge continued to exceed “pretreatment effluent limitations” for chromium, sulfur, and pH (PAS-00102337-338)	20.0%	20% Failed to participate in conduct of allocation as offered by EPA	7.386E-2
AP_ABS						7.386E-2

Allocation Facility Cmass Calculation

Sherwin Williams Co.	60 Lister Ave	Newark	NJ	07105
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	78.19	100.00%	1,351.31	0.00%	4,406.45	100.00%	1,789.6	3,219.08	1.018817E-2	32.8
Lead	100.00%	3,873.87	100.00%	2,758.20	0.00%	8,994.15	100.00%	3,652.8	10,284.83	1.018817E-2	104.78
Mercury	100.00%	308.17	100.00%	5.21	0.00%	16.99	100.00%	6.9	320.28	1.018817E-2	3.26
HPAHs	100.00%	10.58	100.00%	-	0.00%	-	100.00%	-	10.58	1.018817E-2	0.11
LPAHs	100.00%	1.17	100.00%	-	0.00%	-	100.00%	-	1.17	1.018817E-2	0.01
PCBs	100.00%	0.92	100.00%	-	0.00%	-	100.00%	-	0.92	1.018817E-2	0.01
DDx	100.00%	0.02	100.00%	-	0.00%	-	100.00%	-	0.02	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

Sherwin Williams Co.

60 Lister Ave

Newark

NJ

07105

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	32.8	1.562E-5	1.078E-5
Lead	0.01	3,200,000.00	104.78	3.274E-5	3.274E-7
Mercury	0.95	42,000.00	3.26	7.769E-5	7.381E-5
HPAHs	0.05	240,000.00	0.11	4.491E-7	2.246E-8
LPAHs	0.01	170,000.00	0.01	7.012E-8	7.012E-10
PCBs	12.87	26,000.00	0.01	3.605E-7	4.640E-6
DDx	1.37	27,000.00	0	7.547E-9	1.034E-8
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

Sherwin Williams Co.	60 Lister Ave	Newark	NJ	07105
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	1.162E-2	32.8	24,375.26	1.162E-2	8.020E-3
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	3.564E-2	104.78	113,942.38	3.564E-2	3.564E-4
Mercury	0.95	42,000.00	4,322.53	41,955.96	7.410E-2	3.26	3,108.76	7.410E-2	7.039E-2
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	2.434E-6	0.11	0.48	2.434E-6	1.217E-7
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	3.883E-7	0.01	0.05	3.883E-7	3.883E-9
PCBs	12.87	26,000.00	20,066.54	25,795.56	4.585E-5	0.01	1.18	4.585E-5	5.901E-4
DDx	1.37	27,000.00	2,516.93	26,974.36	7.946E-6	0	0.21	7.946E-6	1.089E-5
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

Sherwin Williams Co.	60 Lister Ave	Newark	NJ	07105
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	Operations from 1901-1999
	# hours/per day discharged	From 1901-1924 wastewater directly discharged to Passaic River
7	#days/week discharged	Volumes from:
52	#weeks/yr discharged	1972 Waste Effluent Survey = 64429000 gallons in 1971
79,268,000	calc gal/yr discharge (PAS00013183, PAS000123267, PAS00052110,11)	Heavy Metals Source Determination Study (1976-1978) = 0.3250 gpd
		1982 Hazardous Waste Investigation = 150000 gpd (avg)
1925	Yr Ops started	
1999	Yr Ops ceased	
74	calc #yrs facility operated	
Copper (Cu)		
74	#yrs facility discharged	1972 Waste Effluent Survey
0.26	calc mg/L COC discharged (PAS00013183, PAS000123267, PAS00052110,11)	Heavy Metals Source Determination Study (1976-1978)
3.785	L per gallon (Merck Index)	1982 Hazardous Waste Investigation
0.000001	kg per mg (Merck Index)	
5,757.76	calc kg COC discharged	
Lead (Pb)		
74	#yrs facility discharged	1972 Waste Effluent Survey
0.53	calc mg/L COC discharged (PAS00013183, PAS000123267, PAS00052110,11)	Heavy Metals Source Determination Study (1976-1978)
3.785	L per gallon (Merck Index)	1982 Hazardous Waste Investigation
0.000001	kg per mg (Merck Index)	
11,752.35	calc kg COC discharged	
Mercury (Hg)		
74	#yrs facility discharged	1972 Waste Effluent Survey
0.0010	calc mg/L COC discharged (PAS00013183, PAS000123267, PAS00052110,11)	Heavy Metals Source Determination Study (1976-1978)
3.785	L per gallon (Merck Index)	1982 Hazardous Waste Investigation
0.000001	kg per mg (Merck Index)	
22.20	calc kg COC discharged	
HPAHs		
74	#yrs facility discharged	
-	calc mg/L O&G	
10%	% O&G that is considered PAHs	
50%	% COC in O&G considered as PAHs	
-	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
74	#yrs facility discharged	
-	calc mg/L O&G	
10%	% O&G that is considered PAHs	
50%	% COC in O&G considered as PAHs	
-	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
PCBs		
49	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
33	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
38	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
74	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
54	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
41	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
26	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
5,757.76	kg Copper	
11,752.35	kg Lead	
22.20	kg Mercury	
-	kg HPAHs	
-	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	Operations from 1901-1999
	# days/week discharged	From 1901-1924 wastewater directly discharged to Passaic River
	# weeks/yr discharged	Volumes from:
79,268,000	# gals/yr directly discharged (PAS00013183, PAS000123267, PAS00052110,11)	1972 Waste Effluent Survey = 64429000 gallons in 1971
4.08	ft; 30yr average annual precipitation per Rutgers information	Heavy Metals Source Determination Study (1976-1978) = 0.3250 gpd 1982 Hazardous Waste Investigation = 150000 gpd (avg)
43,560	ft2 per acre	
13.00	acres	
50%	Percent Precip to River	
1901	Yr Ops started	
1924	Yr Ops ceased	
23	calc #yrs facility operated	
Copper (Cu)		
23	#yrs facility discharged	1972 Waste Effluent Survey
0.26	calc mg/L COC discharged (PAS00013183, PAS000123267, PAS00052110,11)	Heavy Metals Source Determination Study (1976-1978)
3.785	L per gallon (Merck Index)	1982 Hazardous Waste Investigation
0.000001	kg per mg (Merck Index)	
1,789.58	calc kg COC discharged	
Lead (Pb)		
23	#yrs facility discharged	1972 Waste Effluent Survey
0.53	calc mg/L COC discharged (PAS00013183, PAS000123267, PAS00052110,11)	Heavy Metals Source Determination Study (1976-1978)
3.785	L per gallon (Merck Index)	1982 Hazardous Waste Investigation
0.000001	kg per mg (Merck Index)	
3,652.76	calc kg COC discharged	
Mercury (Hg)		
23	#yrs facility discharged	1972 Waste Effluent Survey
0.0010	calc mg/L COC discharged (PAS00013183, PAS000123267, PAS00052110,11)	Heavy Metals Source Determination Study (1976-1978)
3.785	L per gallon (Merck Index)	1982 Hazardous Waste Investigation
0.000001	kg per mg (Merck Index)	
6.90	calc kg COC discharged	
HPAHs		
23	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
23	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
PCBs		
-4	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
-15	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
-25	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
23	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
-21	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
-20	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
-25	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
1,789.58	kg Copper	
3,652.76	kg Lead	
6.90	kg Mercury	
-	kg HPAHs	
-	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	ASSUMPTIONS, REFERENCES	COMMENTS/NOTES
	4.08 FEET/YEAR AVERAGE PRECIPITATION	Long term average annual precipitation includes floods and hurricane events occurring over time.	Data from Rutgers University
	13 ACRES - TOTAL SITE AREA (acres)	FDR Page 1. 11.04 acres (PAP-00126535) to 13 acres (PAP-00126441). Max value used.	
	0.65 ACRES - AFFECTED AREA	Lot appears mostly paved based on Google Earth aerial photos from 1995 and Feb 2017 Final Soil RI (PAP-00126443), which states that 95% of the site is paved. The 2017 Soil RI also states that in the past, the site was entirely covered with impervious surfaces (PAP-00126564). Since operations began in 1901, will assume that some of the lot was not paved, ~5%.	
	4,046.86 METERS <sup>2</sup> /ACRE		
	2,630 METERS <sup>2</sup> (AFFECTED AREA)		
	0.0001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.	
	0 METERS <sup>3</sup> /YEAR (ERODED SOIL VOLUME)		
	1901 Year site operations began 1999 Year site processing and storage operations ceased	FDR Page 1. Production of paints and varnish. FDR Page 1. Ceased operations.	
	98 NUMBER YEARS DISCHARGE	FDR Page 1	
	26 METERS <sup>3</sup> (TOTAL SOIL VOLUME DISCHARGED OVER TIME)		
	1,963 KG/M <sup>3</sup> SOIL DENSITY	0-4 ft of fill beneath concrete is reddish brown silt with some fine to medium sand and gravel (PAP-00126564). Bulk density range for silty sand and gravel is 1442 KG/M <sup>3</sup> to 2483 KG/M <sup>3</sup> , so use average. (http://structx.com/Soil_Properties_002.html)	
	50,590 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME)		
Copper (Cu)	98 YEARS DISCHARGED 1,530 MG/KG (MAX CONCENTRATION)	Copper concentration at B8-0.0-0.5 from 0-0.5 ft bgs (PAP-00367337). Used max result from shallowest depth.	
	0.000001 kg per mg (Merck Index)		
	77 KILOGRAMS DISCHARGED		
Lead (Pb)	98 YEARS DISCHARGED 75800 MG/KG (AVERAGE CONCENTRATION)	Lead concentration from H4-0.5/1 from 0.5-1 ft (PAP-00367333). Using the max result from shallowest depth.	
	0.000001 kg per mg (Merck Index)		
	3,835 KILOGRAMS DISCHARGED		
Mercury (Hg)	98 YEARS DISCHARGED 6,030.0 MG/KG (MAX CONCENTRATION)	Mercury concentration in AOC19-05-1.5-2 from 1.5-2 ft (PAP-00367332). Due to the density of mercury, the highest concentration is likely in subsurface soil.	
	0.000001 kg per mg (Merck Index)		
	305 KILOGRAMS DISCHARGED		
PAHs (listed in Benzo(a)pyrene Equivalent conversion table)	98 YEARS DISCHARGED 206.9 MG/KG (TOTAL PAH AVERAGE CONCENTRATION)	Total concentration of PAH compounds for Benzo(a)pyrene Equivalent <a href="https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample">https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample</a> .	
	0.000001 kg per mg (Merck Index)		
	10 KILOGRAMS DISCHARGED		
PAHs (others detected)	98 YEARS DISCHARGED 23 MG/KG (TOTAL PAH MAX CONCENTRATION)	Naphthalene - 23 mg/kg 0-0.5 ft (PAP-00367328)	
	0.000001 kg per mg (Merck Index)		
	1 KILOGRAMS DISCHARGED		

0-0.5 ft AOC13-03 (PAP-00367324)  
0-0.5 ft (PAP-00367326)  
0-0.5 ft (PAP-00367330)  
0-0.5 ft (PAP-00367330)  
0-0.5 ft (PAP-00367324)  
24 mg/kg 0-0.5 ft (PAP-00367330)  
0-0.5 ft (PAP-00367330)

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	140.000	1.0	140.0000
Benzo(a)anthracene	74.000	0.1	7.4000
Benzo(b)fluoranthene	250.000	0.1	25.0000
Benzo(k)fluoranthene	89.000	0.01	0.8900
Chrysene	200.000	0.001	0.2000
Dibenz(a,h)anthracene	24.000	1.0	24.0000
Indeno(1,2,3-cd)pyrene	94.000	0.1	9.4000
DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg			
Total Benzo(a)pyrene Equivalents =			206.9

PCBs	
69 YEARS DISCHARGED	
18 MG/KG (MAX OF REPORTED CONCENTRATIONS)	
0.000001 kg per mg (Merck Index)	
1 KILOGRAMS DISCHARGED	
DDx	
98 YEARS DISCHARGED within DDx Timeline	
0.38 MG/KG (MAX CONCENTRATION)	
3.785 L per gallon (Merck Index)	
0.000001 kg per mg (Merck Index)	
0 KILOGRAMS DISCHARGED	
Dieldrin	
98 YEARS DISCHARGED within Dieldrin Timeline	
0.093 MG/KG (MAX CONCENTRATION)	
3.785 L per gallon (Merck Index)	
0.000001 kg per mg (Merck Index)	
0 KILOGRAMS DISCHARGED	
Dioxins/Furans	
NONE FOUND IN AVAILABLE DOCUMENTATION	
98 YEARS DISCHARGED	
0.023 MG/KG (MAX CONCENTRATION)	
0.000001 kg per mg (Merck Index)	
0 calc kg COC discharged	
SUMMARY CMASS ESTIMATES:	
77.40 kg Copper	
3,834.74 kg Lead	
305.06 kg Mercury	
10.47 kg PAHs (Benzo(a)pyrene Equivalent)	
1.16 kg PAHs (Other)	
0.91 kg PCBs	
0.02 kg DDx	
0.00 kg Dieldrin	
0.00 kg Dioxins/Furans	
4,229.77 MASS (KG) DISCHARGED FROM SURFACE SOIL	

The 2017 Report indicates that PCB contamination is due to an off-site source, possibly a former oil refinery, that was located along the southwestern boundary of the Copco Parcel. The area was capped but the date was not provided (FDR Page 3).  
18 mg/kg was identified in the Copco Parcel (FDR Page 3).

FDR Page 4 - DDT overflowed from a tanker at the adjacent former Diamond Shamrock site and ran onto the Sherwin Williams site (PAP-00145018-19)

FDR 5 - Insecticides may have been stored 1940s-1960s but no other info (PAP-00126497).

Sum of 4,4-DDD and 4-4-DDE concentrations from sample at 0-0.5 ft (PAP-00367342)

Dieldrin concentration from sample at 0-0.5 ft (PAP-00367341)

Dioxins were identified onsite but attributed to a different source (FDR page 3) (former manufacturing operations at an adjacent superfund site (PAP-00126551))

Dioxins/furans (TEQ) from sample at 0-0.5 ft (PAP-00367345)

Discharge Calcs	Direct Discharge Information	ASSUMPTIONS, REFERENCES	COMMENTS/NOTES
	4.08 FEET/YEAR AVERAGE PRECIPITATION	Long term average annual precipitation includes floods and hurricane events occurring over time.	Data from Rutgers University
	13 ACRES - TOTAL SITE AREA (acres)	FDR Page 1. 11.04 acres (PAP-00126535) to 13 acres (PAP-00126441). Max value used.	
	0.65 ACRES - AFFECTED AREA	Lot appears mostly paved based on Google Earth aerial photos from 1995 and Feb 2017 Final Soil RI (PAP-00126443), which states that 95% of the site is paved. The 2017 Soil RI also states that in the past, the site was entirely covered with impervious surfaces (PAP-00126564). Since operations began in 1901, will assume that some of the lot was not paved, ~5%.	
	4,046.86 METERS <sup>2</sup> /ACRE		
	2,630 METERS <sup>2</sup> (AFFECTED AREA)		
	0.0001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.	
	0 METERS <sup>3</sup> /YEAR (ERODED SOIL VOLUME)		
	1998 Year site operations began 1999 Year site processing and storage operations ceased	Release to the Passaic documented March 1998 (FDR Page 10) Conservatively assume a one year spill period (FDR Page 10)	
	1 NUMBER YEARS DISCHARGE		
	0 METERS <sup>3</sup> (TOTAL SOIL VOLUME DISCHARGED OVER TIME)		
	1,963 KG/M <sup>3</sup> SOIL DENSITY	0-4 ft of fill beneath concrete is reddish brown silt with some fine to medium sand and gravel (PAP-00126564). Bulk density range for silty sand and gravel is 1442 KG/M <sup>3</sup> to 2483 KG/M <sup>3</sup> , so use average. (http://structx.com/Soil_Properties_002.html)	
	516 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME)		
		Specific to the March 1998 release. A leak in an AST with slurry and cracks in the AST pad resulted in a release to the Passaic. No known samples were collected (FDR Page 10, PAP-00126438). Will assume contamination levels from main spreadsheet.	
Copper (Cu)	1 YEARS DISCHARGED 1,530 MG/KG (MAX CONCENTRATION)		B8-0.0-0.5 from 0-0.5 ft bgs (PAP-00367337). Used max result from shallowest depth.
	0.000001 kg per mg (Merck Index) 1 KILOGRAMS DISCHARGED		
Lead (Pb)	1 YEARS DISCHARGED 75800 MG/KG (AVERAGE CONCENTRATION)		H4-0.5/1 from 0.5-1 ft (PAP-00367333). Using the max result from shallowest depth.
	0.000001 kg per mg (Merck Index) 39 KILOGRAMS DISCHARGED		
Mercury (Hg)	1 YEARS DISCHARGED 6,030.0 MG/KG (MAX CONCENTRATION) 0.000001 kg per mg (Merck Index) 3 KILOGRAMS DISCHARGED		AOC19-05-1.5-2 from 1.5-2 ft (PAP-00367332). Due to the density of mercury, the highest concentration is likely in subsurface soil.

PAHs (listed in Benzo(a)pyrene Equivalent conversion table)	
1 YEARS DISCHARGED	
206.9 MG/KG (TOTAL PAH AVERAGE CONCENTRATION)	
0.000001 kg per mg (Merck Index)	
0 KILOGRAMS DISCHARGED	
PAHs (others detected)	
1 YEARS DISCHARGED	
23 MG/KG (TOTAL PAH MAX CONCENTRATION)	
0.000001 kg per mg (Merck Index)	
0 KILOGRAMS DISCHARGED	
PCBs	
1 YEARS DISCHARGED	
18 MG/KG (MAX OF REPORTED CONCENTRATIONS)	
0.000001 kg per mg (Merck Index)	
0 KILOGRAMS DISCHARGED	
DDx	
1 YEARS DISCHARGED within DDx Timeline	
0.38 MG/KG (MAX CONCENTRATION)	
3.785 L per gallon (Merck Index)	
0.000001 kg per mg (Merck Index)	
0 KILOGRAMS DISCHARGED	
Dieldrin	
1 YEARS DISCHARGED within Dieldrin Timeline	
0.093 MG/KG (MAX CONCENTRATION)	
3.785 L per gallon (Merck Index)	
0.000001 kg per mg (Merck Index)	
0 KILOGRAMS DISCHARGED	
Dioxins/Furans	
NONE FOUND IN AVAILABLE DOCUMENTATION	
1 YEARS DISCHARGED	
0.023 MG/KG (MAX CONCENTRATION)	
0.000001 kg per mg (Merck Index)	
0 calc kg COC discharged	
SUMMARY CMASS ESTIMATES:	
0.79 kg Copper	
39.13 kg Lead	
3.11 kg Mercury	
0.11 kg PAHs (Benzo(a)pyrene Equivalent)	
0.01 kg PAHs (Other)	
0.01 kg PCBs	
0.00 kg DDx	
0.00 kg Dieldrin	
0.00 kg Dioxins/Furans	
43.16 MASS (KG) DISCHARGED FROM SURFACE SOIL	

Total concentration of PAH compounds for Benzo(a)pyrene Equivalent  
https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.

Naphthalene - 23 mg/kg 0-0.5 ft (PAP-00367328)

The 2017 Report indicates that PCB contamination is due to an off-site source, possibly a former oil refinery, that was located along the southwestern boundary of the Copco Parcel. The area was capped but the date was not provided (FDR Page 3).  
18 mg/kg was identified in the Copco Parcel (FDR Page 3).

FDR Page 4 - DDT overflowed from a tanker at the adjacent former Diamond Shamrock site and ran onto the Sherwin Williams site (PAP-00145018-19)

Sum of 4,4-DDD and 4-4-DDE concentrations from sample at 0-0.5 ft (PAP-00367342)

Dieldrin concentration from sample at 0-0.5 ft (PAP-00367341)

Dioxins were identified onsite but attributed to a different source (FDR page 3) (former manufacturing operations at an adjacent superfund site (PAP-00126551))

Dioxins/furans (TEQ) from sample at 0-0.5 ft (PAP-00367345)

	Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
0-0.5 ft AOC13-03 (PAP-00367324)	Benzo(a)pyrene	140.000	1.0	140.0000
0-0.5 ft (PAP-00367326)	Benzo(a)anthracene	74.000	0.1	7.4000
0-0.5 ft (PAP-00367330)	Benzo(b)fluoranthene	250.000	0.1	25.0000
0-0.5 ft (PAP-00367330)	Benzo(k)fluoranthene	89.000	0.01	0.8900
0-0.5 ft (PAP-00367324)	Chrysene	200.000	0.001	0.2000
24 mg/kg 0-0.5 ft (PAP-00367330)	Dibenz(a,h)anthracene	24.000	1.0	24.0000
0-0.5 ft (PAP-00367330)	Indeno(1,2,3-cd)pyrene	94.000	0.1	9.4000
DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg				
Total Benzo(a)pyrene Equivalents =				206.9

FDR 5 - Insecticides may have been stored 1940s-1960s but no other info (PAP-00126497).

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation

Sherwin Williams Co.

60 Lister Ave		Newark	NJ	07105				
Facility BS	CUF	CUF_Category	CUF_NOTES		COF	COF_NOTES	Facility Adjusted BS	
8.958E-5	5.0%	Occasional Noncompliance	Spills (emulsion paint and washwater/thinner) identified by former employees resulted in discharges to the Passaic River, but information for the quantity of the discharge or if they contained COCs was not available. NOV was issued by PVSC in 1986 as a result of cleaning causing an accumulation of gray viscous material in the PVSC sand catcher. (No COC involvement) This was due to an accidental in-plant chemical spill, which caused blockages within their waste piping disposal system (PAS-00014642-47). Correspondence from May and June 1987 discusses the continued problem of paint materials discharging from Sherwin Williams and clogging up the PVSC sand catcher located at the entrance of the Sherwin Williams site (PAS-00014638-41).		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	7.615E-5	
							AP_ABS	7.615E-5

Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation

Sherwin Williams Co.

60 Lister Ave		Newark	NJ	07105				
Facility BS	CUF	CUF_Category	CUF_NOTES		COF	COF_NOTES	Facility Adjusted BS	
7.937E-2	5.0%	Occasional Noncompliance	Spills (emulsion paint and washwater/thinner) identified by former employees resulted in discharges to the Passaic River, but information for the quantity of the discharge or if they contained COCs was not available. NOV was issued by PVSC in 1986 as a result of cleaning causing an accumulation of gray viscous material in the PVSC sand catcher. (No COC involvement) This was due to an accidental in-plant chemical spill, which caused blockages within their waste piping disposal system (PAS-00014642-47). Correspondence from May and June 1987 discusses the continued problem of paint materials discharging from Sherwin Williams and clogging up the PVSC sand catcher located at the entrance of the Sherwin Williams site (PAS-00014638-41).		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	6.746E-2	
							AP_ABS	6.746E-2

Allocation Facility Cmass Calculation

SpectraServ, Inc.	75 Jacobus Avenue	Kearny	NJ	07032
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	58.29	100.00%	-	0.00%	185,704.58	100.00%	9,810.8	9,869.13	1.018817E-2	100.55
Lead	100.00%	-	100.00%	-	0.00%	145,901.45	100.00%	7,910.1	7,910.1	1.018817E-2	80.59
Mercury	100.00%	0.13	100.00%	-	0.00%	12.47	100.00%	-	0.13	1.018817E-2	0
HPAHs	100.00%	1.64	100.00%	-	0.00%	-	100.00%	-	1.64	1.018817E-2	0.02
LPAHs	100.00%	1.79	100.00%	-	0.00%	-	100.00%	-	1.79	1.018817E-2	0.02
PCBs	100.00%	1.2	100.00%	-	0.00%	-	100.00%	-	1.2	1.018817E-2	0.01
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

SpectraServ, Inc.

75 Jacobus Avenue

Kearny

NJ

07032

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	100.55	4.788E-5	3.304E-5
Lead	0.01	3,200,000.00	80.59	2.518E-5	2.518E-7
Mercury	0.95	42,000.00	0	3.153E-8	2.996E-8
HPAHs	0.05	240,000.00	0.02	6.962E-8	3.481E-9
LPAHs	0.01	170,000.00	0.02	1.073E-7	1.073E-9
PCBs	12.87	26,000.00	0.01	4.702E-7	6.052E-6
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

SpectraServ, Inc.	75 Jacobus Avenue	Kearny	NJ	07032
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	3.563E-2	100.55	74,730.33	3.563E-2	2.459E-2
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	2.741E-2	80.59	87,633.5	2.741E-2	2.741E-4
Mercury	0.95	42,000.00	4,322.53	41,955.96	3.007E-5	0	1.26	3.007E-5	2.857E-5
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	3.773E-7	0.02	0.07	3.773E-7	1.887E-8
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	5.941E-7	0.02	0.08	5.941E-7	5.941E-9
PCBs	12.87	26,000.00	20,066.54	25,795.56	5.980E-5	0.01	1.54	5.980E-5	7.696E-4
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

SpectraServ, Inc.	75 Jacobus Avenue	Kearny	NJ	07032
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	Limited data, assuming discharge to PVSC is 365 days per year.
	# hours/per day discharged	1986 USEPA PA Report = 50000-100000gpd
	#days/week discharged	1991 PVSC Sewer Connection Permit = 164250000 gallons/year
	#weeks/yr discharged	2015 permit limits = 0.082 MGD
76,893,333	calc gal/yr discharge PAS00054825, PAP00455914, PAP00206942, PAP00192816	
1962	Yr Ops started	
2020	Yr Ops ceased	
58	calc #yrs facility operated	
Copper (Cu)		
58	#yrs facility discharged	2012-2016 DMRs showed range of .011-79.9mg/l discharged. Assuming average = 39.96 mg/l
11.001	calc mg/L COC discharged PAS00054825, PAP00455914, PAP00206942, PAP00192816	2015 Permit Limit = 1.06mg/l
3.785	L per gallon (Merck Index)	2017 Permit Limit = <.0048mg/l
0.000001	kg per mg (Merck Index)	2020 Permit Limit = 3.98 mg/l
185,704.58	calc kg COC discharged	
Lead (Pb)		
58	#yrs facility discharged	1991 PVSC Sewer Connection Permit = .43 mg/l avg
8.64	calc mg/L COC discharged PAS00054825, PAP00455914, PAP00206942, PAP00192816	2012-2016 DMRs showed range of 5.1-60.46mg/l discharged. Assuming average = 32.78 mg/l
3.785	L per gallon (Merck Index)	2015 Permit Limit = .283 mg/l
0.000001	kg per mg (Merck Index)	2017 Permit Limit = <.21 mg/l
145,901.46	calc kg COC discharged	2020 permit limit = 1.3 mg/l
Mercury (Hg)		
58	#yrs facility discharged	
0.000739	calc mg/L COC discharged PAP00192816	2015 Permit Limit <.000739 mg/l
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
12.47	calc kg COC discharged	
HPAHs		
58	#yrs facility discharged	
-	calc mg/L O&G	
10%	% O&G that is considered PAHs	
50%	% COC in O&G considered as PAHs	
-	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
58	#yrs facility discharged	
-	calc mg/L O&G	
10%	% O&G that is considered PAHs	
50%	% COC in O&G considered as PAHs	
-	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
PCBs		
16	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
11	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
26	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
58	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
59	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
24	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
14	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
185,704.58	kg Copper	
145,901.46	kg Lead	
12.47	kg Mercury	
-	kg HPAHs	
-	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	

-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	Stormwater Directly Discharged to Passaic River.....no data on flow so calculated based on rainfall data and assuming 50% makes to river
	# days/week discharged	
	# weeks/yr discharged	
4,324,598	# gals/yr directly discharged	
4.08	ft; 30yr average annual precipitation per Rutgers information	
	acres	
43,560	ft2 per acre	
6.50	acres	
50%	Percent Precip to River	
1962	Yr Ops started	
2020	Yr Ops ceased	
58	calc #yrs facility operated	
Copper (Cu)		
58	#yrs facility discharged	2012-2016 DMRs showed range of .011-79.9mg/l discharged. Assuming average = 39.96 mg/l
11.001	calc mg/L COC discharged PAS00054825, PAP00455914, PAP00206942, PAP00192816	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
10,444.31	calc kg COC discharged	
Lead (Pb)		
58	#yrs facility discharged	1991 PVSC Sewer Connection Permit = .43 mg/l avg
8.64	calc mg/L COC discharged PAS00054825, PAP00455914, PAP00206942, PAP00192816	2012-2016 DMRs showed range of 5.1-60.46mg/l discharged. Assuming average = 32.78 mg/l
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
8,205.72	calc kg COC discharged	
Mercury (Hg)		
58	#yrs facility discharged	
-	calc mg/L COC discharged PAP00192816	2015 Permit Limit <0.000739 mg/l
3.785	L per gallon (Merck Index)	Credit for NJPDES Permit
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
58	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
58	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
PCBs		
16	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
11	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
26	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
58	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
59	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
24	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
14	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
9,810.84	kg Copper	
7,910.10	kg Lead	
-	kg Mercury	
-	kg HPAHs	
-	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	ASSUMPTIONS, REFERENCES	COMMENTS/NOTES
	4.08 FEET/YEAR AVERAGE PRECIPITATION	Long term average annual precipitation includes floods and hurricane events occurring over time.	Data from Rutgers University.
	6.5 ACRES - TOTAL SITE AREA (acres)	FDR page 1	
	1 ACRES - AFFECTED AREA	Rough estimate of site area with exposed fill determined from review of historical aerial photographs 1995-2020 (Google Earth)	
	4,046.86 METERS <sup>2</sup> /ACRE		
	2,023 METERS <sup>2</sup> (AFFECTED AREA)		
	0.0001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.	
	0 METERS <sup>3</sup> /YEAR (ERODED SOIL VOLUME)	VOLUME/YEAR DISCHARGED TO PASSAIC RIVER	
	1962 Year site operations began 2020 Year site processing and storage operations ceased	FDR page 1 Present (FDR page 1)	
	58 NUMBER YEARS DISCHARGE		
	12 METERS <sup>3</sup> (TOTAL SOIL VOLUME DISCHARGED OVER TIME)		
	1,963 KG/M <sup>3</sup> SOIL DENSITY	Fill reported as fine to coarse sand, with some silt and trace and gravel (PAP-00192948-62). Bulk density range for silty sand and gravel 1442 KG/M <sup>3</sup> to 2483 KG/M <sup>3</sup> , so use average. (http://structx.com/Soil_Properties_002.html)	
	23,038 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME)		
Copper (Cu)	58 YEARS DISCHARGED 2,530 MG/KG (MAX CONCENTRATION)	Copper concentration in on-site surface soil sample S-21 (0-1) (PAS-00054863).	
	0.000001 kg per mg (Merck Index)		
	58 KILOGRAMS DISCHARGED		
Lead (Pb)	58 YEARS DISCHARGED 0 MG/KG (MAX CONCENTRATION)	Lead concentration in on-site surface soil sample S-13 (0-1). Set to 0 since less than HF.	
	0.000001 kg per mg (Merck Index)		
	0 KILOGRAMS DISCHARGED		
Mercury (Hg)	58 YEARS DISCHARGED 5.6 MG/KG (MAX CONCENTRATION)	Mercury concentration in on-site surface soil sample SS-1 (0-1) (PAS-00054863).	
	0.000001 kg per mg (Merck Index)		
	0 KILOGRAMS DISCHARGED		
PAHs (listed in Benzo(a)pyrene Equivalent conversion table)	58 YEARS DISCHARGED 71.3 MG/KG (TOTAL PAH MAX CONCENTRATION)	Total concentration of PAH compounds for Benzo(a)pyrene Equivalent https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.  Sum of Benzo(a)pyrene Equivalent conversion concentrations using maximum concentrations found in surface soil sample S-14 (0-1 ft bgs) (PAS-00054858).	
	0.000001 kg per mg (Merck Index)		
	2 KILOGRAMS DISCHARGED		
PAHs (others detected)	58 YEARS DISCHARGED 77.6 MG/KG (TOTAL PAH MAX CONCENTRATION)	Data below the Benzo(a)pyrene Equivalent Table	
	0.000001 kg per mg (Merck Index)		
	2 KILOGRAMS DISCHARGED		
PCBs	58 YEARS DISCHARGED 52 MG/KG (MAX CONCENTRATION)	Total PCBs concentration in on-site surface soil sample S-21 (0-1) (PAS-00054862).	
	0.000001 kg per mg (Merck Index)		
	1 KILOGRAMS DISCHARGED		
DDx	0 NONE FOUND IN AVAILABLE DOCUMENTATION 0 MG/KG (MAX CONCENTRATION)		
	3.785 L per gallon (Merck Index)		
	0.000001 kg per mg (Merck Index)		
	0 KILOGRAMS DISCHARGED		

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	58.110	1.0	58.1100
Benzo(a)anthracene	36.590	0.1	3.6590
Benzo(b)fluoranthene	55.670	0.1	5.5670
Benzo(k)fluoranthene	0.000	0.01	0.0000
Chrysene	49.400	0.001	0.0494
Dibenz(a,h)anthracene	0.000	1.0	0.0000
Indeno(1,2,3-cd)pyrene	38.650	0.1	3.8650
DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg Total Benzo(a)pyrene Equivalents =			71.3

Sample S-15 (0-1 ft bgs) (PAS-00054858)	
Anthracene	4.214
Acenaphthene	3.808
Acenaphthylene	0
Fluorene	4.196
Naphthalene	27.36
Phenanthrene	22.14
2-Methylnaphthalene	15.93
SUM	77.648

Dieldrin	0	NONE FOUND IN AVAILABLE DOCUMENTATION
	0	MG/KG (MAX CONCENTRATION)
	3.785	L per gallon (Merck Index)
	0.000001	kg per mg (Merck Index)
	0	KILOGRAMS DISCHARGED
Dioxins/Furans	69	NONE FOUND IN AVAILABLE DOCUMENTATION
	0	MG/KG (MAX CONCENTRATION)
	0.000001	kg per mg (Merck Index)
	0	calc kg COC discharged
SUMMARY CMASS ESTIMATES:		
	58.29	kg Copper
	0.00	kg Lead
	0.13	kg Mercury
	1.64	kg PAHs (Benzo(a)pyrene Equivalent)
	1.79	kg PAHs (Other)
	1.20	kg PCBs
	0.00	kg DDx
	0.00	kg Dieldrin
	0.00	kg Dioxins/Furans
63.04 MASS (KG) DISCHARGED FROM SURFACE SOIL		

SpectraServ, Inc.

75 Jacobus Avenue	Kearny	NJ	07032
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Facility BS	CUF	CUF_Category	CUF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
3.938E-5	5.0%	Occasional Noncompliance	The facility has received numerous NOV's from PVSC since 1999. The NOV's were for non-COCs (e.g., petroleum hydrocarbons, discharge of sludge to the sanitary sewer, use of water to dilute a discharge, discharge of floatable greases to the sanitary sewer, discharge of solids to the sanitary sewer, improper discharge monitoring).	0.0%	0% Cooperation with conduct of allocation and requests for related information	4.134E-5

AP_ABS	4.134E-5
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SpectraServ, Inc.

75 Jacobus Avenue	Kearny	NJ	07032
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Facility BS	CUF	CUF_Category	CUF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
2.566E-2	5.0%	Occasional Noncompliance	The facility has received numerous NOV's from PVSC since 1999. The NOV's were for non-COCs (e.g., petroleum hydrocarbons, discharge of sludge to the sanitary sewer, use of water to dilute a discharge, discharge of floatable greases to the sanitary sewer, discharge of solids to the sanitary sewer, improper discharge monitoring).	0.0%	0% Cooperation with conduct of allocation and requests for related information	2.694E-2

AP_ABS	2.694E-2
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Allocation Facility Cmass Calculation

Stanley Black & Decker, Inc.	140 Chapel St	Newark	NJ	07105
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	493.88	100.00%	381.35	0.00%	722.56	100.00%	146.7	1,021.89	1.018817E-2	10.41
Lead	100.00%	7,154.69	100.00%	343.07	0.00%	650.03	100.00%	131.9	7,629.7	1.018817E-2	77.73
Mercury	100.00%	0.38	100.00%	-	0.00%	-	100.00%	-	0.38	1.018817E-2	0
HPAHs	100.00%	0.71	100.00%	2,473.63	0.00%	4,686.88	100.00%	951.3	3,425.67	1.018817E-2	34.9
LPAHs	100.00%	17.27	100.00%	1,649.09	0.00%	3,124.59	100.00%	634.2	2,300.58	1.018817E-2	23.44
PCBs	100.00%	2.19	100.00%	-	0.00%	-	100.00%	-	2.19	1.018817E-2	0.02
DDx	100.00%	0.02	100.00%	-	0.00%	-	100.00%	-	0.02	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

Stanley Black & Decker, Inc.

140 Chapel St

Newark

NJ

07105

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	10.41	4.958E-6	3.421E-6
Lead	0.01	3,200,000.00	77.73	2.429E-5	2.429E-7
Mercury	0.95	42,000.00	0	9.218E-8	8.757E-8
HPAHs	0.05	240,000.00	34.9	1.454E-4	7.271E-6
LPAHs	0.01	170,000.00	23.44	1.379E-4	1.379E-6
PCBs	12.87	26,000.00	0.02	8.582E-7	1.104E-5
DDx	1.37	27,000.00	0	6.868E-9	9.409E-9
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	1.609E-7	1.350E-5

Allocation Facility COC Base Scores - Alternative Calulcation

Stanley Black & Decker, Inc.	140 Chapel St	Newark	NJ	07105
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	3.690E-3	10.41	7,737.91	3.690E-3	2.546E-3
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	2.644E-2	77.73	84,527.	2.644E-2	2.644E-4
Mercury	0.95	42,000.00	4,322.53	41,955.96	8.791E-5	0	3.69	8.791E-5	8.352E-5
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	7.882E-4	34.9	154.26	7.882E-4	3.941E-5
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	7.636E-4	23.44	106.37	7.636E-4	7.636E-6
PCBs	12.87	26,000.00	20,066.54	25,795.56	1.091E-4	0.02	2.82	1.091E-4	1.405E-3
DDx	1.37	27,000.00	2,516.93	26,974.36	7.231E-6	0	0.2	7.231E-6	9.907E-6
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	1.609E-7	0	0	1.609E-7	1.350E-5

Facility Bypass Information

Stanley Black & Decker, Inc.	140 Chapel St	Newark	NJ	07105
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	Prior to 1925 it is presumed that the facility discharged directly to the Passaic River
	# hours/per day discharged	PVSC discharge calculated from 1925-1985 based on available data
	#days/week discharged	1974-1981 discharge volumes
	#weeks/yr discharged	- 43800000, 46566656, 34075888, 17455588 gallons (1974, 1979, 1980 and 1981)
36,920,626	calc gal/yr discharge (PAP00019268, 293, 288, 301)	- 1984 .117 MGD
1925	Yr Ops started	
1985	Yr Ops ceased	
61	calc #yrs facility operated	FDR Page 22
Copper (Cu)		
61	#yrs facility discharged	1980 PVSC Application Data for Metals
0.130	calc mg/L COC discharged PAP00019285	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
1,103.91	calc kg COC discharged	
Lead (Pb)		
61	#yrs facility discharged	1980 PVSC Application Data for Metals
0.117	calc mg/L COC discharged PAP00019285	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
993.09	calc kg COC discharged	
Mercury (Hg)		
61	#yrs facility discharged	
-	calc mg/L COC discharged PAP00019285	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
61	#yrs facility discharged	1980 PVSC Application Data for Oil and Grease
14.00	calc mg/L O&G PAP00019285	
10%	% O&G that is considered PAHs	
60%	% PAHs considered as HPAHs	
0.8	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
7,160.51	calc kg COC discharged	
LPAHs		
61	#yrs facility discharged	1980 PVSC Application Data for Oil and Grease
14.00	calc mg/L O&G PAP00019285	
10%	% O&G that is considered PAHs	
40%	% PAHs considered as LPAHs	
0.6	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
4,773.67	calc kg COC discharged	
PCBs		
49	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
33	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
36	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
61	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
40	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
41	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
26	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
1,103.91	kg Copper	
993.09	kg Lead	
-	kg Mercury	
7,160.51	kg HPAHs	
4,773.67	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	Direct discharge was direct to Passaic River per NJPDES Permits
	# days/week discharged	Prior to 1925 presumed all discharge direct to river
	# weeks/yr discharged	Calculating Stormwater discharge based on rainfall flow and combining with wastewater flow information (assume 34MG per year per POTW-PVSC Calc.)
2,927,420	# gals/yr directly discharged	Volume is stormwater calculated as 2927420 + 34MG/yr
4.08	ft; 30yr average annual precipitation per Rutgers information	Per the assertion that Stanley Black and Decker is not responsible for actions by Atha Tools from the 1800s through 1920s the discharge to surface water Dmass calculation has been modified to be only from 1920-1925 when it is presumed that all discharges were changed to the PVSC
	acres	
43,560	ft2 per acre	
4.40	acres	
50%	Percent Precip to River	
1917	Yr Ops started	
1924	Yr Ops ceased	
8	calc #yrs facility operated	FDR Page 22
Copper (Cu)		
8	#yrs facility discharged	1980 PVSC Application Data for Metals
0.130	calc mg/L COC discharged PAP00019285	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
146.66	calc kg COC discharged	
Lead (Pb)		
8	#yrs facility discharged	1980 PVSC Application Data for Metals
0.1165	calc mg/L COC discharged PAP00019285	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
131.94	calc kg COC discharged	
Mercury (Hg)		
8	#yrs facility discharged	
-	calc mg/L COC discharged PAP00019285	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
8	#yrs facility discharged	1980 PVSC Application Data for Oil and Grease
14.00	calc mg/L O&G PAP00019285	
10%	% O&G that is considered PAHs	
60%	% PAHs considered as HPAHs	
0.8	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
951.33	calc kg COC discharged	
LPAHs		
8	#yrs facility discharged	1980 PVSC Application Data for Oil and Grease
14.00	calc mg/L O&G PAP00019285	
10%	% O&G that is considered PAHs	
40%	% PAHs considered as LPAHs	
0.6	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
634.22	calc kg COC discharged	
PCBs		
-4	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
-15	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
-25	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
8	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
-21	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
-20	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
-25	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
146.66	kg Copper	
131.94	kg Lead	
-	kg Mercury	
951.33	kg HPAHs	
634.22	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

DISCHARGE CALCULATIONS	DIRECT DISCHARGE INFORMATION	ASSUMPTIONS, REFERENCES	COMMENTS/NOTES
	4.08 FEET/YEAR AVERAGE PRECIPITATION	Long term average annual precipitation includes floods and hurricane events occurring over time.	Data from Rutgers University.
	6.2 ACRES - TOTAL SITE AREA (acres)	FDR, page 1, confirmed with Google Earth	Stanley Black and Decker; formerly known as The Stanley Works (Stanley), 139 and 140 Chapel Street, Newark, New Jersey. The site is comprised of two parcels of land separated by Chapel Street. The Western Parcel is approximately 1.8 acres; the Eastern Parcel approximately 4.4 acres (PAS-00085749).
	3.0 ACRES - AFFECTED AREA	3 acres exposed land - western 1.8 acres and eastern 1.2 acres (1995-2020 Google Earth aerial photos)	
	4,046.86 METERS <sup>2</sup> /ACRE		
	12,141 METERS <sup>2</sup> (AFFECTED AREA)		
	0.0001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.	
	1 METERS <sup>3</sup> /YEAR (ERODED SOIL VOLUME)	VOLUME/YEAR DISCHARGED	
	1917 Year Stanley purchased the site	Operator: 1875 – 1985; Owner: 1875 – December 1997; acquired the site in 1917 and merged with The Stanley Works in 1920 (FDR page 1)	
	1997 Year site operations ceased		
	80 NUMBER YEARS DISCHARGE		
	97 METERS <sup>3</sup> (TOTAL SOIL VOLUME DISCHARGED OVER TIME)		
	2,250 KG/M <sup>3</sup> SOIL DENSITY	Fill reported as a variety of materials, including coal slag, cinders, green glass slag, crushed bricks, assorted gravel, and brown-black sand and silt (PAP-00016872-75). Bulk density range 2002 KG/M <sup>3</sup> to 2499 KG/M <sup>3</sup> , so use average. (http://structx.com/Soil_Properties_002.html)	
	218,530 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME)		
Copper (Cu)	80 YEARS DISCHARGED	The entirety of the site is located on historic fill material (FDR page 15)	
2,260 MG/KG (MAX CONCENTRATION)		Well boring 447A-MW05-01 at depth of 0.0-0.5 ft bgs (PAP-00017102)	
0.000001 kg per mg (Merck Index)			
494 KILOGRAMS DISCHARGED			
Lead (Pb)	80 YEARS DISCHARGED		
	32,740 MG/KG MAX CONCENTRATION)	Well boring 447A-MW05-01 at depth of 0.0-0.5 ft bgs (PAP-00017081-110)	
	0.000001 kg per mg (Merck Index)		
7,155 KILOGRAMS DISCHARGED			
Mercury (Hg)	80 YEARS DISCHARGED		
1.7 MG/KG (MAX CONCENTRATION)		Sample location 447A-0001-02 0001 at depth of 5.7-6.2 ft bgs (PAP-00017081)	
	0.000001 kg per mg (Merck Index)		
0 KILOGRAMS DISCHARGED			
PAHs (listed in Benzo(a)pyrene Equivalent conversion table)		Benzo(a)pyrene Equivalent https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample.	
80 YEARS DISCHARGED			
3.3 MG/KG (TOTAL PAH MAX CONCENTRATION)			
0.000001 kg per mg (Merck Index)			
1 KILOGRAMS DISCHARGED			
PAHs (others detected)			
80 YEARS DISCHARGED			
79 MG/KG (TOTAL PAH MAX CONCENTRATION)			
0.000001 kg per mg (Merck Index)			
17 KILOGRAMS DISCHARGED			

PAH CONCENTRATIONS USED HERE ARE FROM SOIL SAMPLE 447A-2101-01 COLLECTED AT DEPTH OF 0.0-0.5 FT. (PAP-00017157). MAX PAH CONCENTRATIONS FOR SHALLOW SURFACE SAMPLES.

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.000	1.0	0.0000
Benzo(a)anthracene	10.000	0.1	1.0000
Benzo(b)fluoranthene	0.000	0.1	0.0000
Benzo(k)fluoranthene	0.000	0.01	0.0000
Chrysene ( OTHERS APPLY TEF = 0.01 )	11.000	0.001	0.0110
Dibenz(a,h)anthracene	1.600	1.0	1.6000
Indeno(1,2,3-cd)pyrene	6.400	0.1	0.6400

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents = 3.3

PCBs	
67 YEARS DISCHARGED	
10 MG/KG (MAX OF REPORTED CONCENTRATIONS)	
0.000001 kg per mg (Merck Index)	
	2 KILOGRAMS DISCHARGED
DDx	
57 YEARS DISCHARGED within DDx Timeline	
0.117 MG/KG (MAX CONCENTRATION)	
0.000001 kg per mg (Merck Index)	
	0.018217 KILOGRAMS DISCHARGED
Dieldrin	
0 YEARS DISCHARGED within Dieldrin Timeline	
0 MG/KG (MAX CONCENTRATION)	
0.000001 kg per mg (Merck Index)	
	0.00 KILOGRAMS DISCHARGED
Dioxins/Furans	
NONE FOUND IN AVAILABLE DOCUMENTATION	
57 YEARS DISCHARGED	
0.0027 MG/KG (MAX CONCENTRATION)	
0.000001 kg per mg (Merck Index)	
	0.0006 KILOGRAMS DISCHARGED
SUMMARY FTMASS ESTIMATES:	
493.88 kg Copper	
7154.69 kg Lead	
0.38 kg Mercury	
0.71 kg PAHs (Benzo(a)pyrene Equivalent)	
17.27 kg PAHs (Other)	
2.19 kg PCBs	
0.0182 kg DDx	
0.0000 kg Dieldrin	
0.0006 kg Dioxins/Furans	
7669.1241 MASS (KG) DISCHARGED FROM SURFACE SOIL	

PCBs were used in a transformer (and possibly other electrical equipment) at the site (PAP-00018252, 257, 328, 332). Transformers were likely present at the site because most manufacturing operations had transformers containing PCBs during the period of operation. These could have led to releases from leaks, poor storage or disposal with replacement, or Stanley generated and shipped 9.86 tons of undrained electrical spills of PCB oils during refill. Max concentration of PCBs (PAP-00017115-55). Number of years changed to reflect a 1930 start date for PCBs. transformers containing PCBs in 1993 (PAP-00018238).

SOIL SAMPLE 447A-MW01-01 COLLECTED FROM DEPTH OF 0.0-1.0 FT CONTAINS ONLY DETECTABLE RESULTS FOR DDx (4,4-DDE AND 4,4'-DDT) SUM = 0.117 mg/kg (PAP-00017131).

Number of years reflect a 1940 start date for DDx.

NONE REPORTED

DIOXIN Octa-CDD DETECTED IN SOIL SAMPLE 447A-0302-01 AT 0.0027 MG/KG.

Number of years reflect a 1940 start date for dioxin.

Stanley Black & Decker, Inc.

140 Chapel St		Newark	NJ	07105			
Facility BS	CUF	CUF_Category		CUF_NOTES	COF	COF_NOTES	Facillty Adjusted BS
3.695E-5	0.0%	Historically Compliant or No Evidence		According to a Request for Information, dated March 30, 2004, Stanley received wastewater treatment system violations associated with its remediation system initiated on December 15, 1998 (PAS-00085670). Violations were for TSS, TOC, TPH in effluent samples collected in 1999 and 2001. There were numerous areas with stained soil. (PAP-00018703, PAP-00018761, PAP-00018779-80, 82, PAP-00018807-09, 12, PAP-00018831, 33).	-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	2.956E-5
AP_ABS							2.956E-5

# Stanley Black & Decker, Inc.

**ARR2807**

**Allocator's Determinations Regarding  
Legal Defenses Raised by Allocation Parties**

**STANLEY BLACK & DECKER**

Stanley Black & Decker note that OCC is currently implementing the Remedial Design for OU2 ("RD"), which is projected by EPA to cost approximately \$165 million. OCC released 41 parties, including Stanley, from OCC's claim for these RD costs. Accordingly, any allocation of OU2 costs that includes OCC and Stanley (and the other parties to the release) must reflect OCC's release of this liability.

ALLOCATOR'S DETERMINATION – Though I have not had the opportunity to review the underlying settlement document and other potentially relevant facts associated with the release provided by OCC, assuming its validity, it is apparent that there is a high likelihood of success in any action against OCC to enforce the release. Given OCC's lack of participation in the allocations process, however, the Allocator does not believe that it is appropriate to account for the amount of any such release in the assignment of allocated shares. Rather, the Allocator notes the existence of the release and recommends that it be taken into account in determining the appropriate amount of any future settlement with EPA.

Allocation Facility Cmass Calculation

STWB Inc.	120 Lister Avenue	Newark	NJ	07105
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	-	0.00%	202.52	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
LPAHs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
PCBs	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

STWB Inc.

120 Lister Avenue

Newark

NJ

07105

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0	0	0
LPAHs	0.01	170,000.00	0	0	0
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

STWB Inc.	120 Lister Avenue	Newark	NJ	07105
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	0	0	0	0	0
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	0	0	0	0	0
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

STWB Inc.	120 Lister Avenue	Newark	NJ	07105
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	Manufacturer of organic/inorganic pigments
	# hours/per day discharged	Phthalo dyes
	#days/week discharged	Transoxide use
	#weeks/yr discharged	Wastewater very limited COCs
1,000,000	calc gal/yr discharge	No information on permits, but assumes all went to sewer system.
		No Flowdate
1957	Yr Ops started	Assuming 1,000,000 gallons per year
1986	Yr Ops ceased	
29	calc #yrs facility operated	
Copper (Cu)		
29	#yrs facility discharged	Use and storage of water soluble copper.
1.85	calc mg/L COC discharged	trace amounts in wastewater discharge. Assuming to be 2mg/l
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
202.52	calc kg COC discharged	
Lead (Pb)		
29	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)		
29	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
29	#yrs facility discharged	
	calc mg/L O&G	
10%	% O&G that is considered PAHs	
60%	% COC in O&G considered as PAHs	
-	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
29	#yrs facility discharged	
	calc mg/L O&G	
10%	% O&G that is considered PAHs	
40%	% COC in O&G considered as PAHs	
-	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
PCBs		
21	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
16	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
30	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
29	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
30	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
29	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
19	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
202.52	kg Copper	
-	kg Lead	
-	kg Mercury	
-	kg HPAHs	
-	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	Assume stormwater direct to Passaic River until 1971
	# days/week discharged	
	# weeks/yr discharged	
1,729,839	# gals/yr directly discharged	
4.08	ft; 30yr average annual precipitation per Rutgers information	
	acres	
43,560	ft <sup>2</sup> per acre	
2.60	acres	
50%	Percent Precip to River	
1957	Yr Ops started	
1971	Yr Ops ceased	
14	calc #yrs facility operated	
Copper (Cu)		
14	#yrs facility discharged	Historically stored 1000-43242 lbs of copper sulfate onsite. Took average amount of 22,121 lbs
-	calc mg/L COC discharged	assume that 1% gets into stormwater discharge direct to Passaic River
3.785	L per gallon (Merck Index)	221.25 pounds in 1729839 gallons of stormwater per year = 15.37 mg/l
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Lead (Pb)		
14	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)		
14	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
14	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
14	#yrs facility discharged	
	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
PCBs		
15	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
15	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
15	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
14	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
15	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
15	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
15	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
-	kg Copper	
-	kg Lead	
-	kg Mercury	
-	kg HPAHs	
-	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Allocation Facility Cmass Calculation

STWB Inc.	192 and 194 Bloomfield Avenue	Bloomfield	NJ	07003
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	-	12.41%	278.98	100.00%	-	34.62	1.018817E-2	0.35
Lead	100.00%	-	100.00%	-	12.41%	6.05	100.00%	-	0.75	1.018817E-2	0.01
Mercury	100.00%	-	100.00%	-	12.41%	-	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	-	100.00%	-	12.41%	39.47	100.00%	0.2	5.06	1.018817E-2	0.05
LPAHs	100.00%	-	100.00%	-	12.41%	26.31	100.00%	0.1	3.37	1.018817E-2	0.03
PCBs	100.00%	-	100.00%	-	12.41%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	12.41%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	12.41%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	12.41%	-	100.00%	-	0	1.018817E-2	0

Allocation Facility COC Base Scores - Protocol Calculation

STWB Inc.	192 and 194 Bloomfield Avenue	Bloomfield	NJ	07003
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0.35	1.680E-7	1.159E-7
Lead	0.01	3,200,000.00	0.01	2.390E-9	2.390E-11
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0.05	2.147E-7	1.074E-8
LPAHs	0.01	170,000.00	0.03	2.021E-7	2.021E-9
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

STWB Inc.	192 and 194 Bloomfield Avenue	Bloomfield	NJ	07003
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	1.250E-4	0.35	262.16	1.250E-4	8.625E-5
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	2.601E-6	0.01	8.32	2.601E-6	2.601E-8
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	1.164E-6	0.05	0.23	1.164E-6	5.818E-8
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	1.119E-6	0.03	0.16	1.119E-6	1.119E-8
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

STWB Inc.	192 and 194 Bloomfield Avenue	Bloomfield	NJ	07003
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Union Outlet	Bypass	12.41%	100.00%	

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	Limited to no information sewer discharges
	# hours/per day discharged	Cleaning Produces and Disinfectant formulation and mixing
	#days/week discharged	Estimating based on Canning Gumm
	#weeks/yr discharged	Wastewater discharged to PVSC from 1931-1965, prior direct to Second River
1,175,000	calc gal/yr discharge	
1931	Yr Ops started	
1965	Yr Ops ceased	
34	calc #yrs facility operated	
Copper (Cu)		
34	#yrs facility discharged	Based on Goodrich
1.85	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
278.98	calc kg COC discharged	
Lead (Pb)		
34	#yrs facility discharged	Based on Goodrich
0.04	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
6.05	calc kg COC discharged	
Mercury (Hg)		
34	#yrs facility discharged	Based on Goodrich
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
34	#yrs facility discharged	Based on Canning Gumm
4.35	calc mg/L O&G	
10%	% O&G that is considered PAHs	
60%	% PAHs considered as HPAHs	
0.26	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
39.47	calc kg COC discharged	
LPAHs		
34	#yrs facility discharged	Based on Goodrich
4.35	calc mg/L O&G	
10%	% O&G that is considered PAHs	
40%	% PAHs considered as LPAHs	
0.17	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
26.31	calc kg COC discharged	
PCBs		
35	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
26	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
16	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
34	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
20	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
21	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
16	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
278.98	kg Copper	
6.05	kg Lead	
-	kg Mercury	
39.47	kg HPAHs	
26.31	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	Limited to no information sewer discharges
	# days/week discharged	Cleaning Produces and Disinfectant formulation and mixing
	# weeks/yr discharged	Estimating based on Canning Gumm
1,175,000	# gals/yr directly discharged	Wastewater discharged to PVSC from 1931-1965, prior direct to Second River
4.08	ft: 30yr average annual precipitation per Rutgers information	
	acres	
43,560	ft2 per acre	
	acres	
50%	Percent Precip to River	
1925	Yr Ops started	
1931	Yr Ops ceased	
6	calc #yrs facility operated	
Copper (Cu)		
6	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Lead (Pb)		
6	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)		
6	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
6	#yrs facility discharged	
0.1	calc mg/L O&G discharged	
10%	% O&G that is considered PAHs	
60%	% PAHs considered as HPAHs	
0.01	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
0.16	calc kg COC discharged	
LPAHs		
6	#yrs facility discharged	
0.1	calc mg/L O&G discharged	
10%	% O&G that is considered PAHs	
40%	% PAHs considered as LPAHs	
0.00	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
0.11	calc kg COC discharged	
PCBs		
3	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
-8	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
-18	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
6	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
-14	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
-13	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
-18	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
-	kg Copper	
-	kg Lead	
-	kg Mercury	
0.16	kg HPAHs	
0.11	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)  
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Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation									
STWB Inc.									
120 Lister Avenue			Newark	NJ	07105				
Facility BS	CUF	CUF_Category	CUF_NOTES			COF	COF_NOTES		Facillty Adjusted BS
0	5.0%	Occasional Noncompliance	PVSC inspection in 1971 noted poor housekeeping at the site and green fluorecein dye discharged into a catch basin within the site area, which reached the Lockwood Street storm sewer and the Passaic River (PAS-00002739). In February 1972, PVSC issued a notice of violation indicating that the sewer department took out a sample from the sewer line and found “chemical in the line.” (PAS-00002741). Note: The specific “chemical in the line” was not identified. On April 27, 1976, a \$750 fine was imposed on TCI for violations of the Spill Prevention, Control, and Countermeasure (SPCC) regulations under Section 311 of the Federal Water Pollution Control Act (PAS-00002727). Note: No additional information was provided. No indication that COC involved			-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities		0
192 and 194 Bloomfield Avenue			Bloomfield	NJ	07003				
Facility BS	CUF	CUF_Category	CUF_NOTES			COF	COF_NOTES		Facillty Adjusted BS
1.287E-7	0.0%	Historically Compliant or No Evidence	No information on violations or sloppy practices was identified in the available file material.			-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities		1.029E-7
									AP_ABS
									1.029E-7

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)  
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Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation						
STWB Inc.						
120 Lister Avenue		Newark	NJ	07105		
Facility BS	CUF	CUF_Category	CUF_NOTES		COF	COF_NOTES
0	5.0%	Occasional Noncompliance	PVSC inspection in 1971 noted poor housekeeping at the site and green fluorecein dye discharged into a catch basin within the site area, which reached the Lockwood Street storm sewer and the Passaic River (PAS-00002739). In February 1972, PVSC issued a notice of violation indicating that the sewer department took out a sample from the sewer line and found “chemical in the line.” (PAS-00002741). Note: The specific “chemical in the line” was not identified. On April 27, 1976, a \$750 fine was imposed on TCI for violations of the Spill Prevention, Control, and Countermeasure (SPCC) regulations under Section 311 of the Federal Water Pollution Control Act (PAS-00002727). Note: No additional information was provided. No indication that COC involved		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities
192 and 194 Bloomfield Avenue		Bloomfield	NJ	07003		
Facility BS	CUF	CUF_Category	CUF_NOTES		COF	COF_NOTES
8.635E-5	0.0%	Historically Compliant or No Evidence	No information on violations or sloppy practices was identified in the available file material.		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities
						AP_ABS
						6.908E-5

Allocation Facility Cmass Calculation

Sun Chemical Corporation (Foundry Street Complex)	185 Foundry Street	Newark	NJ	07105
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	0.34	100.00%	-	0.00%	2,829.40	100.00%	-	0.34	1.018817E-2	0
Lead	100.00%	0.28	100.00%	-	0.00%	499.93	100.00%	-	0.28	1.018817E-2	0
Mercury	100.00%	0.01	100.00%	-	0.00%	1,296.67	100.00%	-	0.01	1.018817E-2	0
HPAHs	100.00%	0.06	100.00%	-	0.00%	54.83	100.00%	-	0.06	1.018817E-2	0
LPAHs	100.00%	0.05	100.00%	-	0.00%	143.59	100.00%	-	0.05	1.018817E-2	0
PCBs	100.00%	0.4	100.00%	-	0.00%	-	100.00%	-	0.4	1.018817E-2	0
DDx	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	0.00%	-	100.00%	-	0	1.018817E-2	0

Sun Chemical Corporation (Foundry Street Complex)	185 Foundry Street	Newark	NJ	07105
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	1.650E-9	1.138E-9
Lead	0.01	3,200,000.00	0	8.915E-10	8.915E-12
Mercury	0.95	42,000.00	0	2.426E-9	2.304E-9
HPAHs	0.05	240,000.00	0	2.547E-9	1.274E-10
LPAHs	0.01	170,000.00	0	2.997E-9	2.997E-11
PCBs	12.87	26,000.00	0	1.567E-7	2.017E-6
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

Sun Chemical Corporation (Foundry Street Complex)	185 Foundry Street	Newark	NJ	07105
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	1.228E-6	0	2.57	1.228E-6	8.471E-7
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	9.703E-7	0	3.1	9.703E-7	9.703E-9
Mercury	0.95	42,000.00	4,322.53	41,955.96	2.313E-6	0	0.1	2.313E-6	2.198E-6
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	1.380E-8	0	0	1.380E-8	6.902E-10
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	1.660E-8	0	0	1.660E-8	1.660E-10
PCBs	12.87	26,000.00	20,066.54	25,795.56	1.993E-5	0	0.51	1.993E-5	2.565E-4
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

Sun Chemical Corporation (Foundry Street Complex)	185 Foundry Street	Newark	NJ	07105
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Newark Bay	Bypass	0.00%	0.00%	Did not discharge waste into the Passaic river

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	PVSC Permit No. 20200038 - discharge of process wastewater, sanitary and storm water
24	# hours/per day discharged	PVSC Permit No. 204-010-42 - discharge of manufacturing residuals treated onsite and discharged
5	#days/week discharged	- limited information on 204-010-42
	#weeks/yr discharged	Main storm sewer to PVSC POTW
20,287,112	calc gal/yr discharge PAP00124262, PAP00123478, PAP00049181	Volume data from:
		- Permit Discharge Limits (2001-2006)
1986	Yr Ops started	- 1986-87 Industrial Pretreatment Program Annual Report
2003	Yr Ops ceased	- 1990 Document
17	calc #yrs facility operated	- Permit application Files and Permits from 1979-1996
Copper (Cu)		
17	#yrs facility discharged	Data from:
2.17	calc mg/L COC discharged PAP00124262, PAP00049181	1990 Permit Sampling Results = 2.75 mg/l
3.785	L per gallon (Merck Index)	1979 & 1990 Sampling Results = .16 mg/l and 2.74 mg/l
0.000001	kg per mg (Merck Index)	2001-2006 Discharge Limits = 3.02 mg/l
2,829.40	calc kg COC discharged	
Lead (Pb)		
17	#yrs facility discharged	Data from:
0.383	calc mg/L COC discharged PAP00124262, PAP00049181	1988, 1990 & 1992 Permit Sampling Results = .084-.219mg/l, ND, 1.246mg/l
3.785	L per gallon (Merck Index)	1979-1996 Sampling Results = .9, .084, .188, .219, <.05, .0683 mg/l
0.000001	kg per mg (Merck Index)	2001-2006 Discharge Limits = .54 mg/l
499.93	calc kg COC discharged	
Mercury (Hg)		
17	#yrs facility discharged	1979, 1990 Sampling Results = .16, 2.74 mg/l
0.9933	calc mg/L COC discharged PAP00124262, PAP00049181	2001-2006 Discharge Limits = .080 mg/l
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
1,296.67	calc kg COC discharged	
HPAHs		
17	#yrs facility discharged	HPAHs from 2001-2006 discharge limits:
	calc mg/L O&G PAP00124262	- Flouranthene 6.75 g/day
10%	% O&G that is considered PAHs	- Pyrene 6.14 g/day
60%	% COC in O&G considered as PAHs	
0.042	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
54.83	calc kg COC discharged	
LPAHs		
17	#yrs facility discharged	LPAHs from 2001-2006 discharge limits
	calc mg/L O&G PAP00124262	- Acenaphthene = 6.8 g/day
10%	% O&G that is considered PAHs	- Anthracene = 6.83 g/day
40%	% COC in O&G considered as PAHs	- Flourene = 6.83 g/day
0.110	calc mg/L LPAHs	- Naphthalene = 6.83 g/day
3.785	L per gallon (Merck Index)	- Phenanthrene = 6.83 g/day
0.000001	kg per mg (Merck Index)	
143.59	calc kg COC discharged	
PCBs		
-8	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
-13	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
2	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
17	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
18	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
0	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
-10	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
2,829.40	kg Copper	
499.93	kg Lead	
1,296.67	kg Mercury	
54.83	kg HPAHs	
143.59	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	ASSUMPTIONS, REFERENCES	COMMENTS/NOTES
	4.083333333 FEET/YEAR AVERAGE PRECIPITATION	Long term average annual precipitation includes floods and hurricane events occurring over time.	Data from Rutgers University
	0.4 ACRES - TOTAL SITE AREA (acres)	FDR page 1	
	0.08 ACRES - AFFECTED AREA	From the facility map on PAS-00044655, it appears there were buildings and other sturctures. Only part of the site was shown as unpaved. For this calculation a conservative estimate of 20% of the total site area was assumed to be unpaved.	
	4,046.86 METERS <sup>2</sup> /ACRE		
	324 METERS <sup>2</sup> (AFFECTED AREA)		
	0.0001 METERS/YEAR (ERODED SOIL THICKNESS)	For this estimate, used a surface soil erosion rate of 0.1 mm/year, or 0.004 inches/year.	
	0.03 METERS <sup>3</sup> /YEAR (ERODED SOIL VOLUME)	VOLUME/YEAR DISCHARGED TO PASSAIC RIVER	
	1986 Year site operations began	Sequa Corporation changed its name to Sun Chemical Corporation, December 31, 1986 (FDR Page 1)	
	1993 Year of site-wide soil remeditation (PAP-00120463)	Operations ended on December 31, 2003 but equipment cleaning and dismantling activities were still being conducted as part of the cessation of operations. The 1992-1993 site-wide remediation included removal of the top two feet of soil from accessible areas of the site and placement of a concrete/asphalt cap over the entire site (PAP-00120487)	
	7 NUMBER YEARS DISCHARGE		
	0 METERS <sup>3</sup> (TOTAL SOIL VOLUME DISCHARGED OVER TIME)		
	1962.5 KG/M3 SOIL DENSITY	Fill reported as 0.504.5 feet of glass, bricks, cement, with brown-black silty/sandy clay and some gravel (PAS-00044960 through PAS-00044964) soil boring logs. Bulk density range 1442 KG/M3 to 2483 KG/M3, so use average. (http://structx.com/Soil_Properties_002.html)	
	445 KILOGRAMS (TOTAL SOIL DISCHARGED OVER TIME)		
		The facility site is not located on regional Historic Fill (FDR page 8)	
Copper (Cu)			
	7 YEARS DISCHARGED		
	762 MG/KG (MAX CONCENTRATION)	Copper was found at a maximum concentration in boring number B-6 (depth of 18-24 inches) in 1988 (PAS-00044905 and FDR page 9)	
	0.000001 kg per mg (Merck Index)		
	0 KILOGRAMS DISCHARGED		
Lead (Pb)			
	7 YEARS DISCHARGED		
	633 MG/KG (AVERAGE CONCENTRATION)	Lead was found at a maximum concentration in boring number B-6 (depth of 18-24 inches) in 1988 (PAS-00044905)	
	0.000001 kg per mg (Merck Index)		
	0 KILOGRAMS DISCHARGED		
Mercury (Hg)			
	7 YEARS DISCHARGED		
	28 MG/KG (MAX CONCENTRATION)	Mercury was found at a maximum concentration in boring number B-2 (depth of 0-6 inches) in 1988 (PAS-00044905)	
	0.000001 kg per mg (Merck Index)		
	0.01 KILOGRAMS DISCHARGED		

PAHs (listed in Benzo(a)pyrene Equivalent conversion table)

7 YEARS DISCHARGED

134.12 MG/KG (TOTAL PAH MAX CONCENTRATION)

0.000001 kg per mg (Merck Index)

0 KILOGRAMS DISCHARGED

PAHs (others detected)

7 YEARS DISCHARGED

116 MG/KG (TOTAL PAH MAX CONCENTRATION)

0.000001 kg per mg (Merck Index)

0 KILOGRAMS DISCHARGED

PCBs

7 YEARS DISCHARGED

910 MG/KG (MAX OF REPORTED CONCENTRATIONS)

0.000001 kg per mg (Merck Index)

0 KILOGRAMS DISCHARGED

SUMMARY CMASS ESTIMATES:

0.34 kg Copper

0.28 kg Lead

0.01 kg Mercury

0.06 kg PAHs (Benzo(a)pyrene Equivalent)

0.05 kg PAHs (Other)

0.40 kg PCBs

1.15 MASS (KG) DISCHARGED FROM SURFACE SOIL

Total concentration of PAH compounds for Benzo(a)pyrene Equivalent  
<https://floridadep.gov/waste/petroleum-restoration/documents/benzo-pyrene-equivalents-conversion-table-one-sample>.

Historic fill was not a consideration for PAH concentrations for the purpose of this calculation.

Data below the Benzo(a)pyrene Equivalent Table

Sample B-12/1 depth 0-6 inches. (PAP-00381910-12)

Historic fill was not a consideration for PAH concentrations for the purpose of this calculation.

The highest concentration of PCBs was found in sample 3-107 (depth 0-6 inches) (PAS-00045069)

Historic fill was not a consideration for PCB concentrations for the purpose of this calculation.

During January 1993, the area with PAH contamination was excavated down to two feet to the perimeter of the site and covered with clean fill (FDR page 16)

Maximum concentrations listed in review of past and present areas of concern (table from PAP-00381912; table on FDR page 8 and PAS-00045320). Sample collected from New Tank Area in front of Press Room. Sample B-12/1 depth of 0-6 inches

Table (PAP-00381912) indicates that Benzo(b)fluoranthene and Benzo(k)fluoranthene were coeluted

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	74.000	1.0	74.0000
Benzo(a)anthracene	110.000	0.1	11.0000
Benzo(b)fluoranthene	240.000	0.1	24.0000
Benzo(k)fluoranthene	240.000	0.01	2.4000
Chrysene	120.000	0.001	0.1200
Dibenz(a,h)anthracene	17.000	1.0	17.0000
Indeno(1,2,3-cd)pyrene	56.000	0.1	5.6000

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents = 134.1

B-12/1 depth 0-6 inches. (PAP-00381910-12)

Anthracene12

Acenaphthene0

Acenaphthylene20

Fluorene0

Naphthalene47

Phenanthrene37

2-Methylnaphthalene0

SUM116

Sun Chemical Corporation (Foundry Street Complex)

185 Foundry Street			Newark	NJ	07105				
Facility BS	CUF	CUF_Category	CUF_NOTES			COF	COF_NOTES	Facillty Adjusted BS	
1.516E-6	5.0%	Occasional Noncompliance	A May 11, 1992 Memorandum documented a lead violation for Sun Chemical Corporation for a sample collected on April 21, 1992 (PAP-00374626; PAS-00111661; PAS-00128931). A 1987 survey found the ground, building surfaces and drums stored near the plant were stained purple, and it was stated that it was believed these stains were from pigments manufactured by Sun Chemical Company (PAP-00031574). In 1990, it was reported that the driveway located between Arkansas Chemical and Sun Chemical Corporation was stained with a magenta colored substance, which also existed on Sun Chemical Corporation's site. A strip like drain running down the center of the driveway contained standing water with a noticeable sheen on it (PAP-00031576-77). According to a February 13, 1991 Memorandum, on November 26, 1990, a RCRA investigation was conducted at Sun Chemical Corporation to investigate “alleged dumping and sloppy housekeeping practices” at the site. The site tour confirmed the discoloration of the surrounding areas as reported in incident No. 90-10-24-1208 (PAS-00044985; PAS-00111388).			-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	1.288E-6	
								AP_ABS	1.288E-6

Sun Chemical Corporation (Foundry Street Complex)

185 Foundry Street			Newark	NJ	07105				
Facility BS	CUF	CUF_Category	CUF_NOTES			COF	COF_NOTES	Facility Adjusted BS	
1.947E-4	5.0%	Occasional Noncompliance	A May 11, 1992 Memorandum documented a lead violation for Sun Chemical Corporation for a sample collected on April 21, 1992 (PAP-00374626; PAS-00111661; PAS-00128931). A 1987 survey found the ground, building surfaces and drums stored near the plant were stained purple, and it was stated that it was believed these stains were from pigments manufactured by Sun Chemical Company (PAP-00031574). In 1990, it was reported that the driveway located between Arkansas Chemical and Sun Chemical Corporation was stained with a magenta colored substance, which also existed on Sun Chemical Corporation's site. A strip like drain running down the center of the driveway contained standing water with a noticeable sheen on it (PAP-00031576-77). According to a February 13, 1991 Memorandum, on November 26, 1990, a RCRA investigation was conducted at Sun Chemical Corporation to investigate “alleged dumping and sloppy housekeeping practices” at the site. The site tour confirmed the discoloration of the surrounding areas as reported in incident No. 90-10-24-1208 (PAS-00044985; PAS-00111388).			-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities	1.655E-4	
								AP_ABS	1.655E-4

Allocation Facility Cmass Calculation

Tate & Lyle Ingredients Americas LLC	100 3rd Avenue	Kearny	NJ	07032
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	-	1.21%	6.24	100.00%	31.7	31.8	1.018817E-2	0.32
Lead	100.00%	-	100.00%	-	1.21%	772.14	100.00%	3.2	12.53	1.018817E-2	0.13
Mercury	100.00%	-	100.00%	-	1.21%	-	100.00%	0.8	0.85	1.018817E-2	0.01
HPAHs	100.00%	-	100.00%	-	1.21%	26.06	100.00%	-	0.32	1.018817E-2	0
LPAHs	100.00%	-	100.00%	-	1.21%	17.37	100.00%	-	0.21	1.018817E-2	0
PCBs	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0

Tate & Lyle Ingredients Americas LLC	100 3rd Avenue	Kearny	NJ	07032
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0.32	1.543E-7	1.064E-7
Lead	0.01	3,200,000.00	0.13	3.990E-8	3.990E-10
Mercury	0.95	42,000.00	0.01	2.052E-7	1.949E-7
HPAHs	0.05	240,000.00	0	1.341E-8	6.704E-10
LPAHs	0.01	170,000.00	0	1.262E-8	1.262E-10
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

Tate & Lyle Ingredients Americas LLC	100 3rd Avenue	Kearny	NJ	07032
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	1.148E-4	0.32	240.78	1.148E-4	7.922E-5
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	4.342E-5	0.13	138.82	4.342E-5	4.342E-7
Mercury	0.95	42,000.00	4,322.53	41,955.96	1.957E-4	0.01	8.21	1.957E-4	1.859E-4
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	7.267E-8	0	0.01	7.267E-8	3.633E-9
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	6.989E-8	0	0.01	6.989E-8	6.989E-10
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

Tate & Lyle Ingredients Americas LLC	100 3rd Avenue	Kearny	NJ	07032
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Ivy	CSO	1.83%	66.23%	

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
	gal discharged per day/week/month	1971 Waste Effluent Survey = 500000 gallon to sanitary
	# hours/per day discharged	1974 Waste Effluent Survey = 500000 gallon to sanitary
	#days/week discharged	1977 permit 2500 gpd to PVSC
	#weeks/yr discharged	
637,500	calc gal/yr discharge PAS00108802, 65 (PAP-00724090)	
1968	Yr Ops started	
1978	Yr Ops ceased	
10	calc #yrs facility operated	
Copper (Cu)		
10	#yrs facility discharged	1972 sampling data
0.26	calc mg/L COC discharged PAS00108864-68	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
6.24	calc kg COC discharged	
Lead (Pb)		
10	#yrs facility discharged	
32.00	calc mg/L COC discharged PAS00108864-68	1972 sampling data
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
772.14	calc kg COC discharged	
Mercury (Hg)		
10	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
10	#yrs facility discharged	
18.00	calc mg/L O&G PAS00108864-68	1972 sampling data
10%	% O&G that is considered PAHs	
60%	% PAHs considered as HPAHs	
1	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
26.06	calc kg COC discharged	
LPAHs		
10	#yrs facility discharged	
18.00	calc mg/L O&G PAS00108864-68	1972 sampling data
10%	% O&G that is considered PAHs	
40%	% PAHs considered as LPAHs	
1	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
17.37	calc kg COC discharged	
PCBs		
10	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
5	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
11	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
10	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
11	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
11	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
8	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
6.24	kg Copper	
772.14	kg Lead	
-	kg Mercury	
26.06	kg HPAHs	
17.37	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

Discharge Calcs	Direct Discharge Information	COMMENTS/NOTES
	# hours/day discharged	1971 Waste Effluent Survey = 11075000
	# days/week discharged	1974 Waste Effluent Survey = 44800000
	# weeks/yr discharged	
27,937,500	# gals/yr directly discharged	
4.08	ft; 30yr average annual precipitation per Rutgers information	
	acres	
43,560	ft <sup>2</sup> per acre	
	acres	
50%	Percent Precip to River	
1968	Yr Ops started	
1978	Yr Ops ceased	
10	calc #yrs facility operated	
Copper (Cu)		
10	#yrs facility discharged	
0.10	calc mg/L COC discharged PAS00108802	1971 Waste Effluent Survey
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
105.74	calc kg COC discharged	
Lead (Pb)		
10	#yrs facility discharged	
0.0100	calc mg/L COC discharged PAS00108802	1971 Waste Effluent Survey
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
10.57	calc kg COC discharged	
Mercury (Hg)		
10	#yrs facility discharged	
0.00080	calc mg/L COC discharged PAS00108802	1971 Waste Effluent Survey
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
0.85	calc kg COC discharged	
HPAHs		
10	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
10	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
PCBs		
10	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
5	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
11	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
10	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
11	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
11	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
8	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for Direct Discharge:		
31.72	kg Copper	
3.17	kg Lead	
0.85	kg Mercury	
-	kg HPAHs	
-	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	

-	kg Dioxins/Furans	

Allocation Facility Cmass Calculation

Tate & Lyle Ingredients Americas LLC	320 Schuyler Avenue	Kearny	NJ	07032
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Constituent Of Concern (COC)	Overland, Fate & Transport C%	Dmass Overland, Fate & Transport	PrePVSC C%	Dmass PrePVSC	PVSC C%	Dmass PVSC	Direct Discharge C%	Dmass Direct Discharge	COC Total Pathway Cmass	COC A%	COC Historic CMass
Copper	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
Lead	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
Mercury	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
HPAHs	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
LPAHs	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
PCBs	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
DDx	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
Dieldrin	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0
Dioxins_Furans	100.00%	-	100.00%	-	1.21%	-	100.00%	-	0	1.018817E-2	0

Tate & Lyle Ingredients Americas LLC

320 Schuyler Avenue

Kearny

NJ

07032

Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	COC Historic CMass	COC Relative Contribution	COC Base Score
Copper	0.69	2,100,000.00	0	0	0
Lead	0.01	3,200,000.00	0	0	0
Mercury	0.95	42,000.00	0	0	0
HPAHs	0.05	240,000.00	0	0	0
LPAHs	0.01	170,000.00	0	0	0
PCBs	12.87	26,000.00	0	0	0
DDx	1.37	27,000.00	0	0	0
Dieldrin	0.13	390.00	0	0	0
Dioxins_Furans	83.92	38.00	0	0	0

Allocation Facility COC Base Scores - Alternative Calulcation

Tate & Lyle Ingredients Americas LLC	320 Schuyler Avenue	Kearny	NJ	07032
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Constituent Of Concern (COC)	Relative Risk Number (RRN)	Total Mass (Tmass)	Total Cmass (TCmass)	Total OS COC ACmass	COC %	COC Historic CMass	Facility OS COC Cmass	COC Relative Responsibility	COC Base Score
Copper	0.69	2,100,000.00	276,960.25	2,097,178.28	0	0	0	0	0
Lead	0.01	3,200,000.00	288,577.67	3,197,059.92	0	0	0	0	0
Mercury	0.95	42,000.00	4,322.53	41,955.96	0	0	0	0	0
HPAHs	0.05	240,000.00	4,346,388.50	195,718.24	0	0	0	0	0
LPAHs	0.01	170,000.00	3,012,835.14	139,304.72	0	0	0	0	0
PCBs	12.87	26,000.00	20,066.54	25,795.56	0	0	0	0	0
DDx	1.37	27,000.00	2,516.93	26,974.36	0	0	0	0	0
Dieldrin	0.13	390.00	1.27	389.99	0	0	0	0	0
Dioxins_Furans	83.92	38.00	3,729.82	0.00	0	0	0	0	0

Facility Bypass Information

Tate & Lyle Ingredients Americas LLC	320 Schuyler Avenue	Kearny	NJ	07032
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Item	Bypass Name	Bypass Type	Time %	Flow %	Bypass Notes
1	Ivy	CSO	1.83%	66.23%	

Discharge Calcs	POTW Discharge Information	COMMENTS/NOTES
2,000	gal discharged per day	Administrative/Sales Office Building from 1968-1976
	# hours/per day discharged	No manufacturing performed.
6	#days/week discharged	Only discharge is sanitary to the PVSC
52	#weeks/yr discharged	No evidence or expectation of any COC discharges from facility
624,000	calc gal/yr discharge	
1968	Yr Ops started	
1976	Yr Ops ceased	
8	calc #yrs facility operated	
Copper (Cu)		
8	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Lead (Pb)		
8	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Mercury (Hg)		
8	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
HPAHs		
8	#yrs facility discharged	
-	calc mg/L O&G	
10%	% O&G that is considered PAHs	
50%	% COC in O&G considered as PAHs	
-	calc mg/L HPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
LPAHs		
8	#yrs facility discharged	
-	calc mg/L O&G	
10%	% O&G that is considered PAHs	
50%	% COC in O&G considered as PAHs	
-	calc mg/L LPAHs	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
PCBs		
9	#yrs facility discharged within PCBs Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
DDx		
5	#yrs facility discharged within DDx Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dieldrin		
9	#yrs facility discharged within Dieldrin Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxins/Furans		
8	#yrs facility discharged	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4-D		
9	#yrs facility discharged within 2,4-D Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,5-T		
9	#yrs facility discharged within 2,4,5-T Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Dioxin/Furan Precursor - 2,4,6-TCP		
8	#yrs facility discharged within 2,4,6-TCP Timeline	
-	calc mg/L COC discharged	
3.785	L per gallon (Merck Index)	
0.000001	kg per mg (Merck Index)	
-	calc kg COC discharged	
Summary DMassCOC for POTW:		
-	kg Copper	
-	kg Lead	
-	kg Mercury	
-	kg HPAHs	
-	kg LPAHs	
-	kg PCBs	
-	kg DDx	
-	kg Dieldrin	
-	kg Dioxins/Furans	

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)  
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Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Protocol Calculation									
Tate & Lyle Ingredients Americas LLC									
100 3rd Avenue		Kearny	NJ	07032					
Facility BS	CUF	CUF_Category		CUF_NOTES		COF	COF_NOTES		Facility Adjusted BS
3.026E-7	0.0%	Historically Compliant or	No Evidence	No information on violations or sloppy practices was identified in the available file material.		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities		2.421E-7
320 Schuyler Avenue		Kearny	NJ	07032					
Facility BS	CUF	CUF_Category		CUF_NOTES		COF	COF_NOTES		Facility Adjusted BS
0	0.0%	Historically Compliant or	No Evidence	No information on violations or sloppy practices was identified in the available file material.		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities		0
									AP_ABS
									2.421E-7

For Public Disclosure by Consent of the Participating Allocation Parties and EPA (Fall 2022)

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Facility Base Scores, Culpability Factor, Cooperation Factor and Adjusted Base Scores - Allocation Calculation									
Tate & Lyle Ingredients Americas LLC									
100 3rd Avenue			Kearny	NJ	07032				
Facility BS	CUF	CUF_Category		CUF_NOTES		COF	COF_NOTES		Facillty Adjusted BS
2.656E-4	0.0%	Historically Compliant or	No Evidence	No information on violations or sloppy practices was identified in the available file material.		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities		2.125E-4
320 Schuyler Avenue			Kearny	NJ	07032				
Facility BS	CUF	CUF_Category		CUF_NOTES		COF	COF_NOTES		Facillty Adjusted BS
0	0.0%	Historically Compliant or	No Evidence	No information on violations or sloppy practices was identified in the available file material.		-20.0%	-20% CPG/SPG member - Continuous provision of funding and participation in PRP Group(s) actions to cooperate with governmental/regulatory entities to address environmental or public harm created by own activities		0
									AP_ABS
									2.125E-4